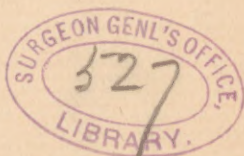


TUTTLE (JAS. P.)

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RECTUM AND URETHRA
As Related in Disease.

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JAMES P. TUTTLE, M. D.,

Adjunct Professor of Diseases of the Rectum, N. Y. Polyclinic.



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*THE RECTUM AND URETHRA AS RE-
LATED IN DISEASE.*

BY JAMES P. TUTTLE.,

Adjunct Professor of Diseases of the Rectum, N. Y.
Polyclinic.

The topographical relations of the rectum and genito-urinary organs, and their similarity of function as excretory channels of the economy, would suggest a close resemblance in pathological affections. Separated in parts by only the peritoneum, and in others by thin layers of cellular tissue, supplied by the same nerve trunks, and nourished by the same chief arteries in general, it would be strange indeed if the diseases of the one were not reflected in, or did not extend to the other. Extension from one to the other, however, is not so frequent as might be expected, in the male sex it being rarely seen except in neoplastic, tubercular and malignant diseases. In females, inflammatory, suppurative and ulcerative diseases of the vagina are very prone to

pass over or through the perineal septum and involve the rectum, and rectal diseases likewise to involve the vagina; but in males the lower portion of the rectum and the urethra proper are separated so effectually by the dense perineal fascias that it is rare for the inflammatory disorders of one to extend into the other. It is therefore, generally in the reflected form that the irritations of the rectum affect the genito urinary organs and *vice versa*.

A closer inquiry into subjective symptoms will surprise others as it has myself in the frequency with which those referred to one organ are produced by diseases in the other. Excessive or deficient functional activity in one often produces disorders in the other, and sometimes we are at a loss to decide whether the rectal or genito-urinary disorder was the original cause of complaint.

Gynecologists claim that constipation in young women is one of the most potent causes of ante-version and ante-flexion. I have seen many cases of constipation due to, and relieved by the restoration of a prolapsed anteverted womb. Which is cause and which effect is not always so easily told, and I am sorry to say is often decided by whether the examiner is a gynecologist or rectal specialist.

Enlarged, subinvoluted, or displaced uteri are frequently the cause of rectal irritation, sphincteric spasm, hemorrhoids, and ulceration in the rectum. Tumors of the womb and

ovaries, pelvic haematocoeles, extra uterine pregnancies, or pelvic cellulitis may any of them produce such distressing symptoms in the rectum that it is never safe to conclude upon any obscure rectal disorder until these organs have been carefully examined and their influence upon the symptoms weighed. On the other hand hemorrhoids, stricture, catarrh and procidentia of the rectum may produce backache, sense of weight, bearing down pains, and all that train of subjective symptoms suggestive of uterine or ovarian disease, and as Emmett has pointed out, an unsuspected fissure may cause "irritability of the bladder, and disturbance of the pelvic circulation leading to tenesmus, prolapse of the uterus, dysmenorrhoea, leucorrhoea and congestion of the ovaries."

At another time it may be profitable to discuss the relationship between diseases of the rectum and those of the uterus and its appendages, but at present we are concerned with that relationship in the rectum and urinary tract.

In order to understand the influence of disease in one of these organs upon the other, it is necessary to have clearly in our minds their common nerve and blood supply. The upper portion of the rectum has a very meagre nerve supply and is seldom the origin of reflex symptoms. On the contrary the lower end has a super-abundant supply of both spinal

and sympathetic branches, and it is in and from this region that we observe most of the reflex affections. The 3rd, 4th and 5th sacral branches of the spinal nerves, supply in common the rectum, anus, bladder, vagina, vulva, scrotum and penis, as well as furnishing branches to the uterus and ovaries. With them are distributed branches of the hypogastric and sacral plexuses of the sympathetic system. The anus and external sphincter are so abundantly supplied with sensory branches that it requires deeper anaesthesia to operate upon the m than upon the eye. The sympathetic plexuses receive branches from the spinal trunks, and we may say they all come from a common center in the lumbar region of the spinal cord. According to Massius there is a center there governing these nerves independently of the cerebrum. Having therefore both afferent and efferent fibres from the same center, it is easy to understand how the stimulation or irritation of one organ may give rise to symptoms in the other. The 5th sacral is distributed chiefly to the skin and superficial parts about the anus, some few of its fibres extending slightly up into the rectum.

The blood supply of the two tracts is also largely in common. Especially is this true of the lower end of the rectum, whose chief supply is from the internal iliac through the internal pudic, which artery supplies also the lower portion of the genito-urinary tract. What influences the circulation in one does so in the

other, and they mutually share anaemia, hyperaemia, congestion and inflammation.

With these anatomical points in view we may more easily understand the following facts and cases.

The influence of excessive venery in the production of hemorrhoids is so well known that I will only mention it to pass on to some of the rarer affections.

Obstructed or difficult urination from whatever condition is a frequent cause of hemorrhoids, rectal congestion and inflammation. I have often seen patients with urethral stricture, acute urethritis, cystitis and stone in the bladder, who suffered as much from their rectal symptoms as from their genito-urinary disorders, and those symptoms were entirely relieved by the cure of the genital disorders. The converse of this is equally true. Fissures, fistulas, ulcers and tumors of the rectum sometimes occasion more distress in the urinary tract than in the rectum itself. Diseases of the prostate, enlargement, inflammation, tuberculosis, calculi, and malignant disease, may all so simulate rectal diseases that the ordinary observer may entirely overlook the real site of the disorder.

Stone in the bladder with its consequent difficult and frequent urination is often the cause of hemorrhoids and rectal congestion and ulceration.

Coming to the less manifest conditions, I

wish particularly to call attention to the influence of rectal disorders in producing and continuing chronic urethral symptoms. The first of these cases which it was my fortune to observe was an attendant in the Philadelphia Hospital. I saw him in Sept., 1881. He complained of spasmodic pain in his perineum and urethra, with difficulty in micturition. Internal urethrotomy had been performed on him and he was at the time passing large sounds for relief of his condition. Examination with bulbous bougies failed to elicit any stricture. The absence of discharge and comparative freedom of the urine from shreds indicated that there was no extensive urethritis. Further inquiry brought out the fact that the urinary symptoms were particularly severe after defecation. Following this act, especially if the feces were hard, he suffered from frequent desire to urinate, with difficulty and much straining in the act, pain in the perineum, and burning in the urethra, and upon suggestion admitted that the pains extended to his rectum. Examination showed a distinct fissure at the anterior commisure of the anus. This was healed by cauterization, stretching was not necessary, and immediately the urethral symptoms disappeared. Having thus early had my attention directed to this fact, it has been my practice to consider this condition in all cases of spasmodic or painful stricture and I have seen not a few like cases.

A more striking case perhaps, is one which recently came under my observation. J. L., 28, a bartender, had gonorrhoea 3 years ago, syphilis a year later. Had stricture and was operated on by internal urethrotomy about 14 months since.

Was troubled at the time he consulted me with perineal and sacral pains, frequent and difficult urination, slight urethral discharge, tenesmus with occasional tinge of blood with last drops of urine. His urine contained a few shreds, but no gonococci were found in them. The bulbous urethra measured 36 F. There was a contraction in the membranous urethra to 30 F., and in the pendulous, $2\frac{3}{4}$ inches from the meatus, to 31 F. He was constipated and suffered from hemorrhoids, though not excessively. The symptoms all pointed to the urethra as the offending organ, and treatment in this line was instituted. Dilatation of the strictured parts and irrigation with permanganate of potash and afterwards Thiersch's solution aggravated rather than relieved the symptoms. Deep instillations of nitrate of silver acted in the same manner, and at this stage the hemorrhoids began to assume more prominence in the case. One of them inflamed, and as he was evidently not progressing I proposed an attack in the other quarter by operation upon the rectum. The clamp and cautery operation was done and within two weeks his urethral and rectal symptoms had entirely disappeared, with

the exception of a few shreds in the urine and the contractures. These could then be treated by the same methods as before without aggravating his symptoms and were soon relieved.

This is an illustration of how congestion and hyperaemia about the rectum may aggravate and continue urethral disease. A similar case to this was referred to me by Dr. Taylor, in which the urethral trouble was continued by a more distinct rectal disorder, an internal blind submucous fistula. The case was one of apparent rectal ulceration, and it was not until many examinations and vain efforts to heal the ulcer had been made, that I found the fistulous tract. The patient suffered at the same time from a chronic posterior urethritis, which all ordinary methods had failed to arrest. It required some time and two operations to cure the fistula. Twice when it was apparently all but healed the urethritis spontaneously disappeared, and when the fistula recurred together with it came the same old urethral symptoms. Since the cure of the fistula the urethritis has permanently disappeared.

The other side of the picture is seen in the following cases:

J. G., laborer, was referred to me at the Polyclinic for pains in the rectum, loins and sacrum. He was irregularly constipated, had lost no blood, and felt no protrusion from the anus when at stool, but afterwards he always had discomfort and neuralgic symptoms in the

rectum and anus. Examination showed nothing whatever abnormal. There were no sensitive points, in fact the examination was less uncomfortable than usual in the normal rectum. I was at a loss to account for the symptoms and began the tentative treatment of hot irrigations, hoping some good from the moral effect as I suspected hypochondriasis. He professed temporary relief, but returned at each clinic hour saying the pain was still there. I finally decided to examine his urethra. Notwithstanding he disclaimed all previous venereal disease, I found a marked stricture in the membranous urethra, $\frac{1}{2}$ inch back of the compressor urinae muscle. This was treated by extreme dilatation; his rectal symptoms began to improve from the first day and continued to do so until entirely well.

That actual pathological conditions may be produced in the rectum by diseases of the urethra and vice versa is illustrated by the following two cases.

H. D., traveling salesman, consulted me in 1883 for pain and chronic discharge from the urethra. The symptoms were in general those described by Otis as pertaining to stricture of large calibre in the urethra, and finding one or two such I proceeded to operate upon them according to that author's method. The strictures were removed but the pains remained. He suffered from perineal aching, frequent painful micturition, and soon found it neces-

sary to go to stool as often as to the urinal. Hemorrhoids developed both external and internal, and I advised an operation upon these in hope that it might relieve him. He refused operation, however, having been promised a cure without it by a specialist of this city. Whatever was done for him was of no avail until a later examination revealed the presence of stone in the prostate. This was removed by perineal section, and for a while his condition seemed improved; his pains were slight, his hemorrhoids reduced and stool and urination became almost normal, if we except a slight dribbling of urine. The inflammation returned in the urethra and prostate, however, and with it hemorrhoids, congestion, and ulceration of the rectum. Blood and pus were discharged from both channels until I feared there was a recto-urethral fistula, but none could be found. A second operation was done through the perineum to remove some gravel in the prostate, and a third to restore the neck of the bladder which had been cut or over stretched, this time supra pubic. The rectum continued to be inflamed and ulcerated all this time, sometimes worse and better according to the urethral condition. Finally the urethra was restored to comparative health and with it the rectum resumed its normal condition without any special treatment and with never an operation on it. In April, 1894, four years after the last operation, by sexual excess

he set up an inflammation in the prostate and urethra at the site of the old trouble. Within a few days the old rectal symptoms reappeared and remained until the urethral conditions had subsided, when they too passed away.

The second case is one in which the original lesion was in the rectum, and the secondary affections in the urethra.

Mr. T., aged 50, merchant, general health good. Had gonorrhoea thirty years ago, no other venereal affection. Habit constipated. General habits good. Four years ago noticed small protrusion at stool without pain or bleeding. He consulted rectal specialist who said he had a polypus and cut it off with scissors. All seemed to go well until some months since when he began to experience sense of weight and fullness in the rectum with a discharge of "mucous" at stool. This was tolerable until about a week before consulting me, he began to suffer from frequent and painful micturition. Two or three days before this he had noticed some blood after urination. He had not been exposed to any venereal disease. Examination of the urethra showed slight stricture in membranous urethra, with a much inflamed and easily bleeding area posterior. He insisted that his rectal condition was a small matter, and urged me to treat his urethra. This I attempted with dilatation, irrigation, and instillations of nitrate of silver. No improvement took place: on the contrary he be-

came much worse, and I insisted upon looking into the influence of his rectal disease upon the urethra. Examination of the rectum showed on the anterior wall an elliptical ulcer about three quarters of an inch long and half as wide. There was a linear cicatrix or connective tissue band running up the rectum for two and a half inches and involving all the tissues apparently, through to the urethra and prostate. There were no burrowing tracts that I could find. I advised application of nitrate of silver to this ulcer, irrigation with hot boric acid solution, and suppositories of morphia and hydrastis twice a day. Within a week his urethral symptoms had so much improved that the morphia was discontinued. The ulcer in the rectum healed in about four weeks, by which time his urethral symptoms had entirely disappeared, notwithstanding no medication or local treatment had been used for it after the first few days.

The following case illustrates the so called neurotic bladder.

Mrs. A., 32, multipara, general health fair but was very nervous and constantly tired. Constipated habit. Suffered from frequent and urgent micturition with excretion of large quantities of normal urine. There was little pain upon urination. Sometimes went for days with comparative comfort. No pathological condition of bladder, urethra or kidneys could be made out. Diuretics and nerve sedatives

produced only partial and temporary relief. Cystoscopy showed bladder and urethra normal. Examination of the rectum showed moderate degree of hemorrhoids with atrophic catarrhal proctitis. The mucous membrane was dry and brittle so that it cracked upon examination and produced several superficial fissures well up within the anus. She was put on laxatives, prolonged daily irrigation of rectum with hot water and the rectal mucous membrane brushed over once in four or five days with a 2 per cent solution of nitrate of silver. The urinary symptoms improved as the rectum recovered its normal condition, and at the present time the periods are from four to five hours instead of every half to one hour apart, as formerly.

The bladder symptoms in this case I believe were purely reflex and due to the periodic production of these little superficial fissures high up within the anus by hard fecal masses or straining at stool.

Another class of cases should be mentioned here and that is tubercular diseases of the genito-urinary tract. Among the earliest and most persistent symptoms of tuberculosis of the seminal vesicles, prostate, and urethra, are rectal pains, tenesmus and constipation. The disease in its later stages generally involves the rectum, but these early reflex symptoms are of much diagnostic value. We have in our clinic now a case of advancing phthisis with

the original focus in the prostate who was sent to us by a genito-urinary specialist for rectal disease. I saw him first two years ago and diagnosed reflex rectal symptoms from tuberculosis of the prostate. The course of his disease has proved the correctness of that opinion.

Such cases can not but impress upon our minds the influences both actual and reflex which disease in one of these organs exerts upon the others. They teach us also the necessity of a wider search for etiological factors in all cases of obscure disease, especially in these correlated organs. The more remotely seated reflexes, due to diseases of the rectum, comprehend a field too wide for the present article. I shall have something to say of them in the future.

